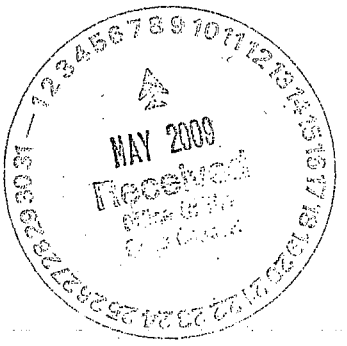

DOWNEY BRAND LLP
MELISSA A. THORME (SBN 151278)
CATHERINE W. KILDUFF (SBN 256331)
621 Capitol Mall, Eighteenth Floor
Sacramento, CA 95814
Telephone: (916) 444-1000
Facsimile: (916) 444-2100

Attorneys for Petitioner
BAY AREA CLEAN WATER AGENCIES

BEFORE THE

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Bay Area Clean Water Agencies' Petition for Review of Action and Failure to Act by the California Regional Water Quality Control Board, San Francisco Bay Region, in Adopting Order No. R2-2009-0039, NPDES Permit No. CA0038024 and Waste Discharge Requirements for the Fairfield-Suisun Sewer District Wastewater Treatment Plant and its associated collection system.	PETITION FOR REVIEW; PRELIMINARY POINTS AND AUTHORITIES IN SUPPORT OF PETITION (WATER CODE SECTIONS 13320 AND 13321)

Petitioner Bay Area Clean Water Agencies ("BACWA"), in accordance with section 13320 of the Water Code, hereby petitions the State Water Resources Control Board ("SWRCB" or "State Board") to review Order No. R2-2009-0039 of the California Regional Water Quality Control Board, San Francisco Bay Region, ("RWQCB" or "Regional Board") reissuing National Pollution Discharge Elimination System ("NPDES") Permit No. CA0038024 ("Permit") and Waste Discharge Requirements for the Fairfield-Suisun Sewer District Wastewater Treatment Plant and its associated collection system ("Fairfield-Suisun Sewer District"). A copy of Order No. R2-2009-0039, adopted on April 8, 2009, is attached to this Petition as **Exhibit A**. The issues and a summary of the bases for the Petition follow. At such time as the full administrative record is available and any other

material has been submitted, BACWA reserves the right to file a more detailed memorandum in support of the Petition and/or in reply to the Regional Board's response.[1]

BACWA is a joint powers authority whose members own and operate publicly-owned treatment works ("POTWs") that discharge treated effluent to San Francisco Bay and its tributaries. Collectively, BACWA's members serve nearly 7 million people in the nine-county Bay Area, treating all domestic, commercial and a significant amount of industrial wastewater. BACWA was formed to develop a region-wide understanding of the watershed protection and enhancement needs through reliance on sound technical, scientific, environmental and economic information and to ensure that this understanding leads to long-term stewardship of the San Francisco Bay Estuary. BACWA member agencies are public agencies, governed by elected officials and managed by professionals, who are dedicated to protecting our water environment and the public health.

On March 2, 2009, BACWA submitted written comments on the tentative versions of the Permit. For the reasons contained herein, BACWA asserts that provisions contained in the recently issued Permit for Fairfield-Suisun Sewer District are improper and inappropriate. BACWA believes the issues being raised are vitally important to Bay Area POTWs.

1. NAME, ADDRESS, TELEPHONE, AND EMAIL FOR PETITIONER:

Michele Pla, Executive Director
Bay Area Clean Water Agencies
P.O. Box 24055 MS 702
Oakland, CA 94623
Telephone: (510) 547-1174
Facsimile: (510) 893-8205 Email: mpla-cleanwater@comcast.net

In addition, all materials in connection with this Petition for Review should also be provided to BACWA's special counsel at the following address:

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[1] The State Board's regulations require submission of a statement of points and authorities in support of a petition (23 C.C.R. §2050(a)(7)), and this document is intended to serve as a preliminary memorandum. However, it is impossible to prepare a thorough statement or a memorandum that is entirely useful to the reviewer in the absence of the complete administrative record, which is not yet available.

Melissa A. Thorme
Downey Brand LLP
621 Capitol Mall, Eighteenth Floor
Sacramento, California 95814
Telephone: (916) 444-1000
Facsimile: (916) 444-2100 Email: mthorme@downeybrand.com

2. THE SPECIFIC ACTION OF THE REGIONAL BOARD WHICH THE STATE BOARD IS REQUESTED TO REVIEW:

BACWA seeks review of Order No. R2-2009-0039, reissuing NPDES Permit No. CA0038024 for Fairfield-Suisun Sewer District. The specific requirements of the Permit that BACWA requests the State Board to review relate to the following:

A. Numeric-based effluent limits for dioxin-TEQ; and

B. Daily maximum effluent limitations.

The State Board is also requested to review the Regional Board's actions in adopting the Permit for compliance with due process and the California Administrative Procedures Act (Cal. Gov't Code §§11340, *et seq.*); the California Environmental Quality Act ("CEQA," Cal. Pub. Res. Code §21000, *et seq.*); [2] the Porter-Cologne Water Quality Control Act (Cal. Water Code §§13000, *et seq.*); the Clean Water Act ("CWA") (33 U.S.C. §§1251, *et seq.*) and its implementing regulations (40 C.F.R. Parts 122, 123, 130 and 131); the Water Quality Control Plan, San Francisco Bay Region (the "Basin Plan"); and the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California ("SIP").

3. THE DATE ON WHICH THE REGIONAL BOARD ACTED:

The Regional Board adopted the Permit on April 8, 2009.

[2] Although the Permit at II.E. discusses an exemption from CEQA under Water Code §13389, that exemption is narrow, and only exempts Chapter 3. The remaining non-exempted parts of CEQA require all Regional Boards to consider the environmental consequences of their permitting actions, and to explore feasible alternatives and mitigation measures prior to the adoption of waste discharge requirements. *See, e.g.*, Cal. Pub. Res. Code §21002; 23 C.C.R. §3733 (stating that the exemption in §13389 "does not apply to the policy provisions of Chapter 1 of CEQA").

4. A STATEMENT OF THE REASONS THE ACTION WAS INAPPROPRIATE OR IMPROPER:

A. <u>The Regional Board Improperly Imposed Numeric Effluent Limitations for Dioxin-TEQ.</u>

BACWA has been concerned about the imposition of numeric effluent limitations for dioxin since the California Toxics Rule ("CTR") was promulgated, notwithstanding that regulations' promise that the "rule would not impose undue or inappropriate burden on the State of California or its dischargers." 65 Fed. Reg. 31,687 (May 18, 2000). BACWA was initially hopeful that the United States Environmental Protection Agency's ("USEPA") prediction that costs to meet the CTR criteria would be "unlikely to reach the high-end of the [cost] range because State authorities are likely to choose implementation options that provide some degree of flexibility or relief to the point source dischargers" was accurate; unfortunately, in practice, this has not been the case. *Id.* at 31,706. The purpose of this petition is to request that the State use its presumed flexibility when issuing discharge permits where compliance with water quality criteria (whether these criteria are CTR criteria or narrative objectives) has been demonstrated to be infeasible.

The Permit BACWA is appealing contains final and interim concentration limits for dioxin-TEQ. *See* Permit at pgs. 14, 15. Similar limits were challenged by BACWA in previous administrative and court appeals. Unfortunately, the Regional Board is not upholding some of the holdings of those previous appeals. BACWA tried for several years to settle the outstanding petitions on Bay Area POTW permits filed since 2000 by BACWA and others, but disagreement as to legal requirements prevented consummation of a global settlement. Because these issues remain as important today as they did nine years ago, or perhaps more important since the time for final compliance with CTR criteria becomes shorter every day, BACWA continues to press for a final ruling to re-incorporate the "flexibility or relief" promised over the years.

BACWA believes that the Regional Board included final numeric water quality-based effluent limitations ("WQBELs") for dioxin-TEQ in the Permit that are contrary to the requirements of the CWA and state law.[3] In most cases, these numeric limitations have been demonstrated to be

[3] The Regional Board must ensure its actions to implement the CWA are consistent with any applicable provisions of the CWA and its implementing regulations. Cal. Water Code §13372.

infeasible to meet,[4] and could result in the permitted entities having to construct expensive new treatment facilities before April 8, 2019 in order to meet the final effluent limits, if the technology even exists to provide such treatment. These treatment technologies far exceed the mandated treatment requirements of the CWA and will likely become unnecessary once new water quality objectives, site specific objectives, or TMDLs for this substance is in place and finally approved.[5] Such a waste of resources is neither reasonable nor required (*see* Water Code §13000), and ignores the fact that control of dioxin-TEQ may instead require a "carefully conceived, agency-approved, long-term pollution control procedure for a complex environmental setting." *Communities for a Better Environment v. SWRCB*, 109 Cal.App.4th 1089, 1107 (2003) ("*Tesoro* case"). For these reasons, BACWA challenges these limits as being contrary to federal and state law requirements.

1) Numeric Effluent Limitations are Not Required.

The Regional Board has imposed numeric WQBELs for various constituents in the Permit based on 40 C.F.R. §122.44(d). *See* Permit at pgs. 14, 15. However, as explained below, section 122.44(d) does not require the imposition of *numeric* WQBELs.

EPA regulations require that "each NPDES permit shall include the following requirements when applicable." *See* 40 C.F.R. § 122.44 (emphasis added). Subsection (d) of this section imposes "any requirements in addition to or more stringent than promulgated effluent limitations

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[4] As defined by SWRCB Policy, "infeasible" means "not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." *See* SIP at Appendix 1-3.

[5] Courts have recognized a step-wise process in pollutant control. In *San Francisco BayKeeper v. Whitman*, 287 F.3d 764,766-767 (April 15, 2002), the Ninth Circuit Court of Appeals determined that:

> "[w]hen the NPDES system fails to adequately clean up certain rivers, streams or smaller water segments, the Act requires the use of a water-quality based approach. States are required to identify such waters, which are to be designated as 'water quality limited segments' ('WQLSs'). The states must then rank these waters in order of priority, and based on that ranking, institute more stringent pollution limits called 'total maximum daily loads' or 'TMDLs.' 33 U.S.C. §§1313(d)(1)(A), (C). TMDLs are the maximum quantity of a pollutant the water body can receive on a daily basis without violating the water quality standard. The TMDL calculations are to ensure that the cumulative impacts of multiple point source discharges are accounted for, and are evaluated in conjunction with pollution from non-point sources. States must ***then*** institute whatever additional cleanup actions are necessary, which can **include further controls on both point and nonpoint pollution sources**." (emphasis added).

Thus, the Court reasoned that the TMDL program is the tool for correcting water quality impairments when they are deemed to exist, not continued ratcheting down under the NPDES permitting program. Any other determination would render the TMDL program superfluous.

guidelines or standards under sections 301, 304, 306, 307, 318 and 405 of the CWA necessary to achieve water quality standards established under Section 303 of the CWA, including State narrative criteria for water quality . . ." 40 C.F.R. § 122.44(d) (emphasis added). The regulations require the imposition of "requirements," not numeric effluent limitations. Furthermore, when numeric effluent limitations are infeasible, EPA regulations specifically authorize the use of Best Management Practices ("BMPs") and other non-numeric or narrative requirements in lieu of numeric limits. 40 C.F.R. §122.44(k)(3); *see also* SWRCB Order No. WQ 2003-12 at pg. 9. Alternatively, the Regional Board could have styled this Permit after recent permits in the Central Valley Region, which have imposed final numeric limits, but stated that these limits do not apply if the discharger undertakes certain actions. *See* Order Nos. R5-2007-0036 and R5-2007-0039. This approach, which USEPA did not veto, takes a creative approach to dealing with infeasible final limits without the necessity of compliance schedules.

The California Court of Appeal in the *Tesoro* case specifically ruled on this issue and stated that numeric limits are not required, and that, where infeasibility is demonstrated, numeric limits can be replaced with non-numeric requirements. *See Communities for a Better Environment v. SWRCB*, 109 Cal.App.4th at 1103-1105; *see accord In the Matter of the Petition of Citizens for a Better Environment, Save San Francisco Bay Association, and Santa Clara Audubon Society*, SWRCB Order No. WQ 91-03 (May 16, 1991). This appellate decision is binding on the State Board as a party to that case and must be followed in the case of this Permit.

By including final numeric effluent limitations in lieu of non-numeric or narrative requirements where numeric limits have been demonstrated to be infeasible, the Regional Board exceeded federal law requirements. If the Regional Board chooses to exceed federal law requirements, then it must comply with state law requirements. *City of Burbank, et al v. SWRCB, et al.*, 35 Cal. 4th 613, 627-628 (2005). However, the Regional Board failed to comply with the requirements of Water Code §13263(a), which requires consideration of several factors, including those contained in Water Code §13241, when adopting numeric effluent limitations more stringent than required by federal law into this Permit.

Thus, the State Board should remand the Permit to the Regional Board and direct the Regional Board to comply with the provisions of 40 C.F.R. §122.44(k)(3), by removing the numeric concentration-based effluent limits for dioxin-TEQ where compliance with such limits has been demonstrated to be infeasible, and replace these numeric limits with narrative requirements (source control, best management practices, etc.) in lieu of the numeric limits.[6]

2) Dioxin-TEQ Limits

The Permit contains the following final effluent limitations for dioxin-TEQ:

AMEL (µg/L)	MDEL (µg/L)	Effective Date
1.4×10^{-8}	2.8×10^{-8}	4/08/2019

The CTR did not promulgate numeric water quality criteria for dioxin-TEQ, only for 2,3,7,8-tetrachlorodibenzo-p-dioxin ("2,3,7,8-TCDD"). In addition, no aquatic life criteria were promulgated in the CTR or the Basin Plan for dioxin-TEQ. Only a human-health criteria for municipal ("Water & Organisms"), and non-municipal drinking water supply waters (*e.g.*, "Organisms Only") were set at 0.000000013 and 0.000000014 µg/L, respectively, based on a carcinogenicity risk of $1x10^{-6}$. 40 C.F.R. §131.38(b)(1)(#16). These figures are based on an assumed exposure pathway of consumption of 6.5 grams per day of organisms from the Bay that are contaminated at a level equal to the criteria concentration, but multiplied by a "bioconcentration factor." 65 Fed. Reg. 31,693 (May 18, 2000). This amount can be consumed over a lifetime (70 years) without expecting an adverse effect. *Id.* However, current detection technologies cannot measure to these levels.

Neither the Permit nor the accompanying Fact Sheet demonstrated reasonable potential for 2,3,7,8-TCDD. *See* Permit at pg. F-24. However, the same table containing the reasonable potential analysis ("RPA") shows reasonable potential ("RP") for dioxin-TEQ, even though no adopted water quality criteria or objective exists for dioxin-TEQ upon which a RPA could be

[6] Such an action would negate the need for compliance schedules as well since Fairfield-Suisun Sewer District would presumably be able to immediately comply with narrative requirements for the constituents at issue.

performed.[7] The Regional Board's action in finding reasonable potential in the absence of applicable numeric water quality criteria was unreasonable, in violation of Water Code §13000, and 40 C.F.R. §122.44(d).

The number used in the RPA for dioxin-TEQ was exactly the same as the promulgated criterion for 2,3,7,8-TCDD. The Permit provides:

> To determine if the discharge of dioxin or dioxin-like compounds from the Plant has reasonable potential to cause or contribute to a violation of the Basin Plan's narrative bioaccumulation WQO, Regional Water Board staff used TEFs [Toxic Equivalent Factors] to express the measured concentrations of 16 dioxin congeners in effluent and background samples as a toxicity weighted concentration equivalent to 2,3,7,8-TCDD. These "equivalent" concentrations were then compared to the CTR numeric criterion for 2,3,7,8-TCDD (1.4×10^{-8} µg/L), thus translating the narrative bioaccumulation objective into a numeric criterion appropriate for the RPA. Although the 1998 WHO scheme includes TEFs for dioxin-like PCBs, they are not included in this Order's version of the TEF procedure because the CTR includes a specific WQC for total PCBs, which includes dioxin-like PCBs.

See Permit at pg. F-31. Given that 11 years have passed since the TEFs were first adopted by the World Health Organization, it is unreasonable for the Regional Board to continue to use a broad narrative objective and not adopt numeric objectives and an implementation plan through a formal rulemaking process as required by Water Code §13241 and §13242, and the triennial review process required by CWA section 303, 33 U.S.C. §1313(c) and (e). The use of a narrative objective to indefinitely skirt state law requirements also ignores the congressional mandate that water quality standards criteria "shall be specific numeric criteria for such toxic pollutants." 33 U.S.C. §1313(c)(2)(B) (emphasis added).

Moreover, the Permit mixes criteria in order to create a finding of RP. The Permit states that "because the background concentration of dioxin-TEQ (4.8×10^{-8} µg/L) exceeds the translated Basin Plan narrative objective (the CTR numeric water quality criterion) for 2,3,7,8-TCDD (1.4×10^{-8} µg/L) and dioxin-TEQ has been detected in the effluent," this somehow demonstrates RP. *See* Permit at pg. F-31 para. (3)(b). The Regional Board should not be allowed

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[7] It should be noted that this is contrary to the RPA for other constituents where the Permit states "No Criteria" in the table instead of inserting a non-promulgated criteria. *See* Permit at pg. F-23-25.

to mix and match 2,3,7,8-TCDD and dioxin-TEQ in order to find RP; they must use each independently, taking into account the different TEF values for each cogener, in order to properly determine RP. The Regional Board did not do this, and these limits should be overturned.

a) The Regional Board Improperly Utilized the Basin Plan's Narrative Objective for Bioaccumulation to Justify the Imposition of a Dioxin-TEQ Limit.

In adopting a numeric effluent limitation for dioxin-TEQ, the Regional Board attempted to justify its actions by claiming that the applicable water quality objectives specified in the Basin Plan require limits to protect against unsafe levels of dioxin in the fatty tissue of fish and other organisms. *See* Permit at pg. F-30. The Basin Plan contains no numeric objectives specifically set to define acceptable levels of these constituents in fish tissue or sediment, and the CTR only set numeric criteria for 2,3,7,8-TCDD, not for all the congeners of dioxins. Thus, the Regional Board improperly relied upon the Basin Plan's narrative objective for Bioaccumulation to justify limits for dioxin-TEQ.

In addition, the Regional Board improperly lumped together all of the congeners of dioxin and furans. Had the RPA been done on each individual congener, most if not all would not show reasonable potential because of the varying TEF for each. *See* Permit at pg. F-31. However, pooling all of the congeners together creates an unnecessary finding of reasonable potential for all congeners. The Regional Board's inclusion of an effluent limit for dioxin-TEQ based on all of the congeners of dioxins and furans improperly ignores that the congeners do not create reasonable potential. Imposition of limits on congeners without reasonable potential violates the specific mandates of the Basin Plan and federal regulations.[8]

A review of the Bioaccumulation objective demonstrates that this objective does not provide authorization for the numeric limits imposed in this instance. The Bioaccumulation objective found on page 3-2 of the Basin Plan provides:

> Many pollutants can accumulate on particles, in sediment, or bioaccumulate in fish or other aquatic organisms. Controllable water

[8] The insertion of limits without reasonable potential is contrary to permit findings that state "WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential." *See* Permit at pg. F-26, para. D.3.e(2).

> quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered.

(emphasis added). Courts have acknowledged that the presence of dioxin may be beyond the Discharger's control. *See, e.g., Communities for a Better Environment*, 109 Cal.App.4th at 1096

> ("Dioxins are not produced intentionally. They are formed as undesired byproducts of combustion and the manufacture and use of certain chlorinated chemical compounds. They exist in the environment worldwide, particularly in air, water, soils, and sediments. They enter the atmosphere through aerial emissions and widely disperse through a number of processes, including erosion, runoff, and volatilization from land or water. For example, automobile exhaust is a common source of dioxins.").

Therefore, control of all of these sources is not within the jurisdiction of Fairfield-Suisun Sewer District. Because the minimal contribution of dioxin-TEQ by Fairfield-Suisun Sewer District's POTW is not a "controllable water quality factor" that is causing a "detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life," imposing a limit for dioxin-TEQ is neither necessary nor based upon the findings and evidence.

Additionally, a numeric effluent limitation can only be imposed through a narrative water quality objective if the narrative objective contains an appropriate mechanism to "translate" the narrative requirement (*i.e.*, to translate a narrative objective into a concentration or mass effluent limitation).[9] In order for a numeric limit derived from a narrative objective to be appropriate, the derivation of the numeric limit must be transparent. A clear explanation of the translation from the narrative water quality objective must be set forth in the NPDES permit.[10] *See* 40 C.F.R.

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[9] Federal regulations mandate that "[w]here a State adopts narrative criteria for toxic pollutants to protect designated uses, the State must provide information identifying the method by which the State intends to regulate point source dischargers of toxic pollutants on water quality limited segments based on such narrative criteria. Such information may be included as part of the standards . . . ." 40 C.F.R. §131.11(a)(2). Since the Basin Plan's narrative objective for Bioaccumulation does not contain an appropriate translation mechanism, the only conclusion can be that subjective, arbitrary, or wholly inapplicable WQBELs for dioxin-TEQ have been imposed in the Permit. The rationale in the *EBMUD* Order, SWRCB Order No. WQ 2002-0012 at pgs. 6-7 does not apply in this case, since the dioxin-TEQ limits are final WQBELs and were not adopted in conformance with federal regulations as there are no 304(a) guidance criteria for dioxin-TEQ. *See* http://www.epa.gov/waterscience/criteria/wqcriteria.html.

[10] In EPA's official guidance documents, EPA explains at length the process the State must go through to implement an adequate translator mechanism. *See* EPA Water Quality Standards Handbook at 3-13 to 3-26 (1994). Among other things, EPA provides that a State's translator procedure for narrative criteria should specifically describe:

§124.8(b)(4); *Topanga Ass'n for a Scenic Community v. County of Los Angeles*, 11 Cal. 3d 506, 515 (1974); *California Edison v. SWRCB*, 116 Cal. App. 3d 751, 761 (1981); *see also In re Petition of the Pinole-Hercules Water Pollution Control Plant and County of San Francisco*, State Board Order No. WQ-95-4 at 10 (Sept. 21, 1995). The failure by the Regional Board to clearly enunciate the translation from a narrative objective to a numeric limit in the Findings or Fact Sheet of the Permit was an abuse of discretion.

Moreover, the Permit fails to show that dioxin-TEQ levels in the discharge have caused a detrimental impact in concentrations of toxic substances found in bottom sediments or aquatic life. Without such a showing, no limits may be imposed under the narrative bioaccumulation objective.

b) Meeting the Dioxin Concentration Limit is Not Feasible

As stated above, dioxins enter the environment from a variety of sources, primarily combustion sources. *See Communities for a Better Environment*, 109 Cal. App. 4th at 1096 ("automobile exhaust is a common source of dioxins."). Further, the Regional Board has concurred with Fairfield-Suisun Sewer District that compliance with the dioxin-TEQ limits is infeasible. *See* Permit at pg. F-31. For these reasons, numeric effluent limitations were not required and represent an abuse of discretion.[11]

- specific, scientifically defensible methods by which the state will implement its narrative toxicity standard for all priority pollutants;
- how these methods will be integrated into the State's priority pollutant control program;
- methods the State will use to identify those pollutants to be regulated in a specific discharge;
- an incremental cancer risk for carcinogens;
- methods for identifying compliance thresholds in permits where calculated limits are below detection;
- methods for selecting appropriate hardness, pH, and temperature variables for criteria expressed as functions;
- methods or policies controlling the size and in-zone quality of mixing zones;
- design flows to be used in translating chemical-specific numeric criteria for aquatic life and human health into permit limits; and
- other methods and information needed to apply standards on a case-by-case basis.

Id. at 3-25; *see also* EPA, TSD for Water Quality-Based Toxics Control at 30-31(1991).

[11] The Regional Board should have done what it did in the Vallejo permit, Order No. R2-2006-0056, which was to state: "Due to the limited monitoring data, no dioxin limits (final or interim) are established. The final limits for dioxin TEQ will be based on the WLA assigned to the Discharger in the TMDL. This Order requires additional dioxin monitoring to complement the Clean Estuary Partnership's special dioxin project, consisting of impairment, assessment, and a conceptual model for dioxin loading into the Bay. The permit will be reopened, as appropriate, to include interim dioxin limitations when additional data become available." Order No. R2-2006-0056 at pg. F-24.

B. The Regional Board Improperly Included Daily Maximum Effluent Limitations.

Where effluent limitations are authorized, federal regulations provide that for discharges from POTWs, all permit effluent limits shall, unless impracticable, be stated as average weekly and average monthly discharge limitations.[12] 40 C.F.R. § 122.45(d)(2). The Permit contains several unsupported daily maximum limits, including, among others, the limit for dioxin-TEQ. *See* Permit at pg. 14.

In order to justify the inclusion of these daily limits, the Regional Board first cited to the language of 40 C.F.R. §122.45(d)(1), which states that: "For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards shall unless impracticable be stated as maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works." *See* Permit at pg. F-19, para. D.1.b.(1). This citation ignores that these discharges *are* from a publicly owned treatment work, and the rule for such a facility is that "average weekly and average monthly discharge limitations [apply] for POTWs." 40 C.F.R. §122.45(d)(2). Therefore, this first justification for daily limits fails.

The second justification also fails. *See* Permit at pg. F-20, para. D.1.B.(2). The State Implementation Policy (SIP) did not change the federal requirements. In enacting the SIP, the State Board may have attempted to modify the federal regulatory prohibition on the use of daily maximum limits for POTWs by stating: "For this method only [referring to limits for aquatic life protection] maximum daily effluent limitations shall be used for publicly-owned treatment works (POTWs) in place of average weekly limitations." SIP at 8, §1.4. However, prior to authorizing the use of daily maximum limitations in POTW permits for compliance with aquatic life criteria in the SIP, the State Board did not make the required demonstration that the imposition of average weekly and average monthly effluent limitations for the protection of aquatic life was "impracticable" per the requirements of 40 C.F.R. §122.45(d). Therefore, the State Board's authorization of daily

[12] Federal regulations also provide that discharges from all dischargers other than POTWs, effluent limitations shall be stated as maximum daily and average monthly discharge limitations. 40 C.F.R. §122.45(d)(1).

maximum limitations for compliance with aquatic life criteria does not meet federal requirements or California Water Code Chapter 5.5 requirements for consistency with federal requirements. As such, the Regional Board should remove all daily maximum effluent limitations based on aquatic life criteria.

Further, the State Board did not include in the SIP the same language purportedly allowing for the inclusion of daily maximum limitations in POTW permits for effluent limitations based upon technological requirements (for conventional pollutants) or upon human health criteria. Therefore, even if the SIP provisions pertaining to maximum daily limits for aquatic life criteria were valid, 40 C.F.R. §122.45(d) requires the Regional Board to remove all daily maximum interim and final effluent limitations based on human health criteria or technological requirements. The criteria for 2,3,7,8-TCDD is human health-based. *See* 40 CFR §131.38(b)(1)(16). Thus, daily maximum limits are not necessary.

The Permit states that since the SIP requires MDELs, it is impracticable to impose average weekly effluent limits. *See* Permit at pg. F-19, para. D.1.B.(2). The Permit's references to the SIP do not constitute an impracticability analysis, and the reference to water quality effects (*e.g.*, fish kills or acute mortality to aquatic organisms) is inadequate to justify daily limits as there is no evidence to support such generic findings. Therefore, the Regional Board's inclusion of daily maximum effluent limitations in the Permit, without a specific, pollutant-by-pollutant impracticability analysis, violated 40 C.F.R. §122.45(d)(2) and Water Code Chapter 5.5.

By violating federal and state law, the Regional Board proceeded without, or in excess of, its jurisdiction and has committed a prejudicial abuse of discretion by not proceeding in a manner required by law. For these reasons, the State Board should direct the Regional Board to remove the daily maximum effluent limitations not properly analyzed for impracticability. *See accord* SWRCB Order No. 2002-0012 at pg. 20-21 (July 18, 2002) ("the Regional Board must include a finding in the permit on remand explaining the impracticability of weekly average limits."); SWRCB Order No. 2002-0015 at pg. 56; *City of Woodland v. Regional Water Quality Control Board for the Central Valley Region, and SWRCB,* Case No. RG04-188200, Statement of Decision at pg. 20.

5. THE MANNER IN WHICH THE PETITIONER IS AGGRIEVED:

The Permit includes requirements, challenged herein, which are unreasonable, contrary to legal requirements, and not supported by the findings and evidence in the administrative record. The limits for dioxin-TEQ are unreasonable because Fairfield-Suisun Sewer District has extremely limited control over influent sources. Further, these requirements could ultimately impose considerable costs on the agency's ratepayers for potential mandatory and discretionary penalties imposed for non-compliance with the challenged requirements, or for construction of additional treatment units to meet limits imposed without a demonstration that such requirements would result in material improvements in the water quality of the Bay. In fact, such expenditures could have a negative impact on water quality, by diverting limited public funds away from other projects that might have a higher potential for improvements in water quality.

BACWA is aggrieved by unreasonable permit prohibitions that may put Fairfield-Suisun Sewer District in non-compliance with the Permit. BACWA's membership will be aggrieved by any permit provisions that cannot now or in the future be met as federal and state law provide harsh sanctions for non-compliance with effluent limitations in a wastewater discharge permit. For example, California Water Code §13385 prescribes mandatory minimum penalties of $3,000 per day per violation, with narrow exceptions. With this statute, the State has no latitude to excuse noncompliance with the Permit.

Other statutory provisions, while not setting mandatory minimum penalties, create even greater exposure for BACWA's members. The CWA authorizes civil penalties of up to $32,500 per day per violation, 33 U.S.C. § 1319(d), and also authorizes criminal penalties, including the incarceration of public officials, for knowing or negligent permit violations. 33 U.S.C §1319(c); *see U.S. v. Weitzenhoff*, 35 F.3d 1275 (9th Cir. 1994) (managers of treatment plant convicted of permit violations). In addition to enforcement by administrative agencies, private parties can seek civil penalties pursuant to the "citizen suit" provisions of the CWA. *See* 33 U.S.C. §1365.

Likewise, California's Porter-Cologne Water Quality Act contains stiff penalties for violation of effluent limitations in a wastewater discharge permit. *See* Cal. Water Code §§ 13385 and 13387. This act authorizes a penalty of up to $25,000 per day per violation, with additional

liability not to exceed $25 per gallon if the discharge is to navigable waters of the United States and either is "not susceptible to cleanup or is not cleaned up." Cal. Water Code §13385(b)(1)-(2), (d). The act also establishes criminal liability for intentional or negligent violation of effluent limitations contained within a permit. Cal. Water Code §13387(a)-(d).

Furthermore, the application of illegal or unreasonable effluent limitations in violation of federal and state law causes substantial harm to BACWA and its members that have a vested interest in complying with the law. This appeal furthers one of BACWA's express purposes, which is "to represent the interests of the Agency or one or more Member Agencies, including, without limiting the generality of the foregoing, by participating in the appeal of or court challenge of the issuance or denial of issuance of NPDES permits or the adoption or amendment of water quality orders, regulations or decisions."

6. THE SPECIFIC ACTION BY THE STATE OR REGIONAL BOARD WHICH PETITIONER REQUESTS:

Petitioner seeks an Order by the State Board that will remand Order No. R2-2009-0039 to the Regional Board for revisions and will direct the Regional Board to:

A. Remove the numeric effluent limits for dioxin-TEQ; and

B. Remove daily maximum effluent limitations where the Regional Board failed to conduct an impracticability analysis.

7. A STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF LEGAL ISSUES RAISED IN THE PETITION:

BACWA's preliminary statement of points and authorities is set forth in Section 4 above. Nevertheless, BACWA reserves the right to supplement this statement upon receipt and review of the administrative record.

In Section 4, BACWA asserts that provisions of the Permit are inconsistent with the law and otherwise inappropriate for various reasons, including: failure to comply with the Porter-Cologne Water Quality Control Act (Cal. Water Code, §§ 13000 *et seq.*); failure to comply with the CEQA (Cal. Public Resources Code, §§ 21000 *et seq.*, and 23 C.C.R. § 3733); failure to comply with the APA (Cal. Gov't Code, §§ 11340 *et seq.*); inconsistency with the Water Quality Control Plan, San

Francisco Bay Region (Basin Plan); inconsistency with the Clean Water Act (33 U.S.C. §§ 1251 *et seq.*) and its implementing regulations (40 C.F.R. Parts 122, 123, 130, and 131); inconsistency with EPA guidance (EPA's Water Quality Standards Handbook (1994, 3d edition)); absence of findings supporting the provisions of the Order; Regional Board findings that are not supported by the evidence; and other grounds that may be or have been asserted by Petitioner.

8. A STATEMENT THAT THE PETITION HAS BEEN SENT TO THE REGIONAL BOARD AND TO THE DISCHARGER:

A true and correct copy of this Petition was mailed by First Class mail on May 8, 2009, to the Discharger, and to the Regional Board at the following address:

Bruce Wolfe, Executive Officer
California Regional Water Quality Control Board,
San Francisco Region
1515 Clay Street, Suite 1400
Oakland, California 94612

9. A STATEMENT THAT THE SUBSTANTIVE ISSUES AND OBJECTIONS RAISED IN THE PETITION WERE RAISED BEFORE THE REGIONAL BOARD, OR AN EXPLANATION WHY NOT:

The substantive issues and objections were raised before the Regional Board in this permitting action through written comments.

10. PETITIONER'S REQUEST FOR ABEYANCE:

Notwithstanding the vital importance of the issues contained herein, BACWA requests that the State Board place BACWA's Petition for Review in abeyance pursuant to 23 C.C.R. §2050.5(d) to allow time for BACWA to attempt to resolve its concerns with the Regional Board informally.

DATED: May 7, 2009

Respectfully submitted,

Melissa A. Thorme
DOWNEY BRAND LLP
BACWA Special Counsel

EXHIBIT A

Linda S. Adams
Secretary for
Environmental Protection

California Regional Water Quality Control Board

San Francisco Bay Region

1515 Clay Street, Suite 1400, Oakland CA 94612
(510) 622-2300 • Fax (510) 622-2460
http://www.waterboards.ca.gov/sanfranciscobay

Arnold Schwarzenegger
Governor

ORDER NO. R2-2009-0039
NPDES NO. CA0038024

The following Discharger is subject to waste discharge requirements set forth in this Order.

Table 1. Discharger Information

Discharger	Fairfield-Suisun Sewer District
Name of Facility	Fairfield-Suisun Wastewater Treatment Plant and its associated collection system
Facility Address	1010 Chadbourne Road
	Fairfield, CA 94534
	Solano County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a **major** discharge.	

Discharges by the Fairfield-Suisun Wastewater Treatment Plant from the discharge points identified below are subject to waste discharge requirements as set forth in this Order.

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Advanced Secondary Treated Municipal Wastewater	38° 12' 33" N	122° 03' 24" W	Boynton Slough
002	Advanced Secondary Treated Municipal Wastewater	38° 12' 52" N	122° 03' 56" W	Duck Pond 1
003	Advanced Secondary Treated Municipal Wastewater	38° 12' 35" N	122° 03' 29" W	Duck Pond 2
005	Advanced Secondary Treated Municipal Wastewater	38° 14' 00" N	122° 03' 32" W	Ledgewood Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	**April 8, 2009**
This Order shall become effective on:	**June 1, 2009**
This Order shall expire on:	**May 31, 2014**
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**180 days prior to the Order expiration date**

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on **April 8, 2009.**

Digitally signed by Bruce Wolfe
Date: 2009.04.10 15:05:37 -07'00'

Bruce H. Wolfe, Executive Officer

Table of Contents

Tables

Attachments

I. FACILITY INFORMATION

The following Discharger is subject to the waste discharge requirements set forth in this Order:

Table 4. Facility Information

Discharger	Fairfield-Suisun Sewer District
Name of Facility	Fairfield-Suisun Wastewater Treatment Plant and its collection system
Facility Address	1010 Chadbourne Road Fairfield, CA 94534 Solano County
Facility Contact, Title, and Phone	Kathy Hopkins, General Manager, (707) 429-8930
Mailing Address	Same as Facility Address
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	17.5 million gallons per day (MGD) (average dry weather design treatment capacity) 34.8 MGD (peak wet weather treatment capacity)
Service Areas	Cities of Fairfield and Suisun, and unincorporated areas in Solano County
Service Population	132,500 (2008 estimate)

II. FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Regional Water Board), finds:

A. Background. The Fairfield-Suisun Sewer District (hereinafter the Discharger) is currently discharging under Order No. R2-2003-0072, as amended by Order No. R2-2006-0045 (National Pollutant Discharge Elimination System (NPDES) Permit No. CA0038024). The Discharger submitted a Report of Waste Discharge, dated March 31, 2008, and applied to renew its NPDES permit to discharge up to 17.5 MGD (average dry weather flow) of advanced secondary treated wastewater from the Fairfield-Suisun Wastewater Treatment Plant (Plant) and its collection system.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policies are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Discharger owns and operates the Plant, which provides advanced secondary treatment of wastewater from domestic, commercial, and industrial sources from the service areas listed in Table 4, above. The current service population is approximately 132,500 (2008 estimate). The Discharger has a current average dry weather design treatment capacity of 17.5 MGD and plans to increase its average dry weather treatment capacity to 23.7 MGD during the term of this permit. The average discharge rate is 16.7 MGD based on flow data from 2006 to 2008, and the highest maximum daily effluent flow rate from 2006 to 2008 was 37.32 MGD.

Flow enters the Plant headworks from four pump stations. Each pump station force main has a magnetic flow meter measuring flow. The pump stations' combined flow is measured through a Parshall flume downstream of influent screening. Plant recycle (utility water) is included in the inlet pump station flow. As a result, influent flow always contains Plant recycle. The Plant

recycle stream is separately sampled and metered prior to mixing with the influent flow. Then the combined flow (recycle and influent) is sampled and metered. To determine influent flow, Plant influent analyses are mathematically adjusted to arrive at influent loading exclusive of Plant recycle.

Wastewater treatment processes at the Plant include screening and grit removal, primary clarification, optional fixed film roughing filters and intermediate clarification, biological activated sludge, secondary clarification, temporary storage of activated sludge effluent in flow balancing reservoirs (total volume of 12.7 million gallon (MG)), advanced secondary dual-media filtration, disinfection (chlorination), and dechlorination (sulfur dioxide). Biosolids are concentrated using dissolved air flotation thickeners, anaerobically digested, and either mechanically dewatered or dewatered by open-air solar drying beds or lagoons. Biosolids are placed in the Potrero Hills Landfill as alternative daily cover or beneficially reused through agricultural land application.

Wet weather facilities are available that include equalization storage (111 MG) with communition and prechlorination. Flows from the wet weather facilities are returned to the Plant headworks once influent flows subside. The Plant provides containment and advanced secondary treatment of wastewater flows up to the 20-year storm event.

Chlorinated Plant effluent flow is conveyed from the chlorine contact basin to either Discharge Point 001, or to earthen final storage reservoirs (total volume of 20.4 MG), where it is dechlorinated prior to discharge to Boynton Slough. During periods of low flow and/or low irrigation demand, stored water from the final effluent reservoirs is discharged at Discharge Point 001 and is, therefore, a blend of treated wastewater from the chlorine contact chamber effluent and treated wastewater from the storage reservoirs. The outfall pipeline before Discharge Point 001 can also be opened to allow the discharge of dechlorinated effluent to Discharge Points 002 and 003, also known as Duck Ponds 1 and 2.

Approximately 10 percent of the Plant's treated effluent is discharged via a utility pump station that pumps chlorinated effluent from the final storage reservoirs into irrigation conveyance and distribution facilities owned and operated by the Solano Irrigation District. Effluent may also be diverted from the effluent pipe to Discharge Point 001 to the irrigation system. Regional Water Board Order No. 91-147 regulates reclamation for this discharge (agricultural and landscape irrigation, and industrial cooling).

Upon Executive Officer approval pursuant to section VI.C.2.h. of this Order, wet weather treated dechlorinated effluent flows that exceed the capacity of the outfall at Discharge Point 001 (approximately 35 MGD) may be pumped from the utility pump station to Ledgewood Creek (Discharge Point 005). Discharge Point 005 will also provide an alternate discharge point for periods of shutdown at Discharge Point 001 and seismic redundancy for the Plant.

The Plant expansion is expected to be complete and operational by September 2009. However, additional Plant capacity is not authorized by this Order until the Discharger submits the appropriate documentation, as required by section VI.C.2.h. of this Order, and upon Executive Officer approval.

The Discharger's collection system is a separate sanitary sewer and includes 70 miles of sewer line (12 inches in diameter or greater) and 12 pump stations. Sewer lines less than 12 inches in diameter are owned and maintained by jurisdictions separate from the Discharger, including the City of Fairfield, Suisun City, and Travis Air Force Base.

Attachment B provides a map of the area around the Plant. Attachment C provides a flow schematic of the Plant.

C. **Legal Authorities.** This Order is issued pursuant to Clean Water Act (CWA) section 402 and implements regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapters 5.5, Division 7 of the California Water Code (CWC) (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from the Plant to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the CWC (commencing with section 13260).

D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for requirements of the Order, is hereby incorporated into this Order and constitutes part of the findings for this Order. Attachments A through E and G through H are also incorporated into this Order.

E. **California Environmental Quality Act (CEQA).** Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA.

F. **Technology-Based Effluent Limitations.** CWA Section 301(b) and NPDES regulations at 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at minimum and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133. A detailed discussion of technology-based effluent limitation development is included in the Fact Sheet.

G. **Water Quality-Based Effluent Limitations.** CWA section 301(b) and NPDES regulations at 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant that has no numeric criterion or objective, water quality-based effluent limitations (WQBELs) must be established using (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

H. **Water Quality Control Plans.** *The Water Quality Control Plan for the San Francisco Bay Basin* (hereinafter the Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Regional Water Board and

approved by the State Water Resources Control Board (State Water Board), the Office of Administrative Law (OAL), and USEPA. Requirements of this Order implement the Basin Plan.

The Basin Plan states that the beneficial uses of any specifically identified water body generally apply to its tributaries. The Basin Plan does not specifically identify beneficial uses for Boynton Slough, but does identify present and potential uses for Suisun Slough, to which Boynton Slough is tributary. The Basin Plan specifically identifies the beneficial uses of Ledgewood Creek. The Basin Plan specifically identifies the beneficial uses of Suisun Slough, to which Boynton Slough is tributary. The Basin Plan also specifically identifies the beneficial uses of Suisun March, to which the duck ponds are tributary.

The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). The Discharger has performed plant community studies in Boynton Slough and Ledgewood Creek that show brackish marsh plants are present throughout the study area, indicating a tidal influence on each of these receiving waters. Because of the tidal influence on these receiving waters, total dissolved solids levels are expected to exceed 3,000 milligrams per liter (mg/L) and thereby meet an exception to State Water Board Resolution No. 88-63. The MUN designation is therefore not applicable to the receiving waters of this discharge. Beneficial uses applicable to Boynton Slough, Ledgewood Creek, and the duck ponds are summarized in Table 5.

Table 5. Beneficial Uses of Boynton Slough, Ledgewood Creek, and Duck Ponds

Discharge Point	Receiving Water Name	Beneficial Uses
001	Boynton Slough (Tributary to Suisun Slough)	Fish Spawning (SPWN) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV)
002 and 003	Duck Ponds 1 and 2 (Both tributary to Suisun Marsh)	Estuarine Habitat (EST) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Fish Spawning (SPWN) Wildlife Habitat (WILD)
005	Ledgewood Creek	Freshwater Replenishment (FRSH) Cold Freshwater Habitat (COLD) Fish Migration (MIGR) Fish Spawning (SPWN) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-contact Water Recreation (REC2)

Neither Boynton Slough nor Ledgewood Creek is listed as an impaired waterbody on the State's current (2006) list of impaired waters pursuant to CWA section 303(d), but Suisun Marsh, which

includes Boynton Slough, Ledgewood Creek, and the duck ponds, is 303(d) listed for metals, nutrients, low dissolved oxygen, and salinity.

The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR apply in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

J. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria USEPA promulgated for California through the NTR and to the priority pollutant objectives Regional Water Board established in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria USEPA promulgated through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

K. **Compliance Schedules and Interim Requirements.** SIP Section 2.1 provides that, based on an existing discharger's request and demonstration that it is infeasible to achieve immediate compliance with an effluent limitation derived from a CTR criterion, a compliance schedule may be allowed in an NPDES permit. Unless an exception has been granted under SIP section 5.3, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter.

The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*, which includes compliance schedule policies for pollutants that are not addressed by the SIP. This policy has been approved by OAL and USEPA, and became effective on August 27, 2008.

L. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes [65 Fed. Reg. 24641 (April 27, 2000) (codified at 40 CFR 131.21)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on oil and grease, pH, total suspended solids (TSS), and biochemical oxygen demand (BOD). Derivation of these technology-based limitations is discussed in the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than these minimum federal technology-based requirements as necessary to meet water quality standards.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the SIP. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for the purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

N. Antidegradation Policy. NPDES regulations at 40 CFR 131.12 require that the State water quality standards include an antidegradation policy consistent with federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. Anti-Backsliding Requirements. CWA Sections 402(o)(2) and 303(d)(4) and NPDES regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in Order No. R2-2003-0072. As discussed in detail in the Fact Sheet, this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

P. Monitoring and Reporting. NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

Q. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must

comply with all standard provisions and with those additional conditions that apply under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the Fact Sheet.

R. Provisions and Requirements Implementing State Law. There are no provisions or requirements in this Order that are included to implement State law only. Such provisions or requirements are not required or authorized under the federal CWA, and consequently, violations of these provisions or requirements are not subject to the enforcement remedies that are available for NPDES violations.

S. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet.

T. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

IT IS HEREBY ORDERED that this Order supersedes Order Nos. R2-2003-0072, and R2-2006-0045, except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited.

B. The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in Section I.G.2 and I.G.4 of Attachment D of this Order.

C. The average dry weather flow, measured at Monitoring Locations E-001, as described in the attached Monitoring and Reporting Plan (MRP) (Attachment E), shall not exceed 17.5 MGD. Upon Executive Officer approval of the submittals required section VI.C.2.e of this Order, the (total) permitted average dry weather discharge will increase to 23.7 MGD, measured at E-001 and E-005; and discharges to Ledgewood Creek at Discharge Point 005 shall be authorized in accordance with the limitations and conditions established by this Order.

The average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.

D. Any sanitary sewer overflow that results in a discharge of untreated or partially treated wastewater to waters of the United States is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS – DISCHARGE POINTS 001, 002, 003 AND 005

1. Effluent Limitations for Conventional and Non-Conventional Pollutants

a. The Discharger shall maintain compliance with the following effluent limitations for Discharge Points 001, 002, 003, and 005, with compliance measured at Monitoring Location E-001-D, except where noted that compliance shall be determined at E-001, as described in the attached MRP (Attachment E). Effluent limitations shall become effective at Discharge Point 005 immediately upon Executive Officer approval of discharge at this outfall.

Table 6. Effluent Limitations for Conventional and Non-Conventional Pollutants

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD)	mg/L	10	15	20	---	---
Total Suspended Solids (TSS)	mg/L	10	15	20	---	---
Oil and Grease	mg/L	---	---	10	---	---
pH [1],[2]	s.u.	---	---	---	6.5	8.5
Turbidity	NTU	---	---	10	---	---
Total Residual Chlorine [2]	mg/L	---	---	---	---	0.0 [3]

Footnotes to Table 6:

(1) If the Discharger monitors pH continuously, pursuant to 40 CFR 401.17, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied: (i) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) no individual excursion from the range of pH values shall exceed 60 minutes.

(2) Compliance shall be determined at Monitoring Location E-001. The chlorine residual effluent limit applies during all times when chlorination is used for disinfection of the effluent.

(3) This requirement is defined as below the limit of detection in standard test methods as defined in the latest edition of *Standard Methods for the Examination of Water and Wastewater*. The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, chlorine, and sulfur dioxide dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff will conclude that these chlorine residual exceedances are false positives and are not violations of the Order's Total Residual Chlorine limit.

b. **BOD and TSS 85 Percent Removal:** The concentration-based average monthly percent removal of BOD and TSS shall not be less than 85 percent.

c. **Enterococcus Bacteria:** The 30-day geometric mean value for all samples analyzed for enterococcus bacteria shall not exceed 33 colonies per 100 mLs.

2. Effluent Limitations for Toxic Pollutants

The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 001, 002, 003, and 005, with compliance measured for at Monitoring Location E-001-D (except as specified), as described in the attached MRP (Attachment E). Effluent limitations shall become effective at Discharge Point 005 immediately upon Executive Officer approval of discharge at this outfall.

Table 7. Effluent Limitations for Toxic Pollutants

Parameter	Units	Final Effluent Limitations [1], [2]	
		Average Monthly	Maximum Daily
Copper	µg/L	7.9	15
Cyanide (E-001)	µg/L	7.4	18
Cyanide (E-002, E-003, E-005)	µg/L	2.1	5.3
Dioxin-TEQ	µg/L	1.4×10^{-8}	2.8×10^{-8}
Chlorodibromomethane [3]	µg/L	34	68
Dichlorobromomethane	µg/L	46	92
Total Ammonia	mg/L N	2.0	4.0

Footnotes to Table 7:

(1) a. Limitations for toxic pollutants apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).
b. All metals limitations are expressed as total recoverable metal.

(2) A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the Reporting Level for that constituent. As outlined in SIP Section 2.4.5, Table 8, below, indicates the Minimum Level (ML) for compliance determination purposes. An ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

(3) Final effluent limitations shall become effective on May 18, 2010.

Table 8. Minimum Levels for Pollutants with Effluent Limitations

Parameter	Minimum Level	Units
Copper	0.5	µg/L
Cyanide	5	µg/L
Chlorodibromomethane	0.5	µg/L
Dichlorobromomethane	0.5	
Ammonia	0.2	mg/L
Dioxin-TEQ	As specified below	
2,3,7,8-TCDD	5	pg/L
1,2,3,7,8-PeCDD	25	pg/L
1,2,3,4,7,8-HxCDD	25	pg/L
1,2,3,6,7,8-HxCDD	25	pg/L
1,2,3,7,8,9-HxCDD	25	pg/L
1,2,3,4,6,7,8-HpCDD	25	pg/L
OCDD	50	pg/L
2,3,7,8-TCDF	5	pg/L
1,2,3,7,8-PeCDF	25	pg/L
2,3,4,7,8-PeCDF	25	pg/L
1,2,3,4,7,8-HxCDF	25	pg/L
1,2,3,6,7,8-HxCDF	25	pg/L
1,2,3,7,8,9-HxCDF	25	pg/L
2,3,4,6,7,8-HxCDF	25	pg/L
1,2,3,4,6,7,8-HpCDF	25	pg/L
1,2,3,4,7,8,9-HpCDF	25	pg/L
OCDF	50	pg/L

3. Interim Effluent Limitations

The Discharger shall maintain compliance with the following effluent limitation at Discharge Point 001, 002, 003, and 005, with compliance measured at Monitoring Location E-001-D, as described in the attached MRP (Attachment E). The interim limit for dioxin-TEQ shall remain in effect until 10 years from the effective date of this Order. At that time, the final limits in Table 7 shall become effective.

Table 9. Interim Effluent Limitations for Dioxin-TEQ

Parameter	Units	AMEL
Dioxin-TEQ	µg/L	6.3×10^{-5} µg/L

4. Acute Toxicity

a. Representative samples of the effluent at Discharge Points 001, 002, 003, and 005, with compliance measured at Monitoring Location E-001 or E-005, as described in the attached MRP, shall meet the following limits for acute toxicity. Bioassays shall be conducted in compliance with Section V.A of the MRP (Attachment E).

The survival of organisms in undiluted combined effluent shall be:

- an eleven (11) sample median value of not less than 90 percent survival, and
- an eleven (11) sample 90 percentile value of not less than 70 percent survival.

b. These acute toxicity limitations are further defined as follows:

11 sample median: A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit if five or more of the past ten or less bioassay tests show less than 90 percent survival.

90th percentile: A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit if one or more of the past ten or less bioassay tests show less than 70 percent survival.

c. Bioassays shall be performed using the most up-to-date USEPA protocol and the most sensitive species based on the most recent screening test results. Bioassays shall be conducted in compliance with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms,* currently 5th Edition (EPA-821-R-02-012).

d. If the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is in compliance with effluent limits, then such toxicity does not constitute a violation of this effluent limitation.

5. Chronic Toxicity

a. Compliance with the Basin Plan narrative chronic toxicity objective shall be demonstrated according to the following tiered requirements based on results from representative samples of the treated final effluent at Monitoring Location EFF-001 or EFF-005, as described in the attached MRP, which meet test acceptability criteria, and follow requirements of Section V.B of the MRP (Attachment E). Failure to conduct the required toxicity tests or a toxicity reduction evaluation (TRE) within the period designated in the MRP may result in the establishment of effluent limitations for chronic toxicity.

(1) Conduct routine quarterly monitoring.

(2) Accelerate monitoring after exceeding a three sample median of 1 chronic toxicity units (TUc) or single-sample maximum of 2 TUc, consistent with Table 4-5 of the Basin Plan for shallow-water dischargers. Accelerated monitoring shall consist of monthly monitoring.

(3) Return to routine monitoring if accelerated monitoring does not exceed the "trigger" in (2), above.

(4) If accelerated monitoring confirms consistent toxicity above the "trigger" in (2), above, initiate toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) in accordance with a workplan submitted in accordance with Section V.B.3 of the MRP (Attachment E) that incorporates any and all comments from the Executive Officer.

(5) Return to routine monitoring after appropriate elements of the TRE workplan are implemented and either the toxicity drops below the "trigger" level in (2), above, or, based on the results of the TRE, the Executive Officer authorizes a return to routine monitoring.

b. Test Species and Methods

The Discharger shall conduct routine monitoring with the test species and protocols specified in Section V.B of the MRP (Attachment E). The Discharger shall also perform Chronic Toxicity Screening Phase monitoring as described in the Appendix E-1 of the MRP (Attachment E). Chronic Toxicity Monitoring Screening Phase Requirements, Critical Life Stage Toxicity Tests, and definitions of terms used in the chronic toxicity monitoring are identified in Appendices E-1 and E-2 of the MRP (Attachment E).

V. RECEIVING WATER LIMITATIONS

1. Receiving surface water limitations are based on Basin Plan water quality objectives and are a required part of this Order. The discharges shall not cause the following in Boynton Slough, Ledgewood Creek, Suisun Marsh, or the duck ponds:

a. Floating, suspended, or deposited macroscopic particulate matter or foams;

b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

d. Visible, floating, suspended, or deposited oil and other products of petroleum origin; or

e. Toxic or other deleterious substances to be present in concentrations or quantities that will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or that render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State within one foot of the water surface:

a. Dissolved Oxygen	5.0 mg/L, minimum, from June 1 through November 15
	7.0 mg/L, minimum, at all other times of the year

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.

b. Dissolved Sulfide	Natural background levels
c. pH	Within a range from 6.5 to 8.5
d. Nutrients:	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

3. The discharge shall not cause a violation of any particular water quality standard for receiving waters adopted by the Regional or State Water Boards as required by the CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to CWA Section 303, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with federal Standard Provisions included in Attachment D of this Order.

2. The Discharger shall comply with all applicable items of the Standard Provisions and Reporting Requirements for NPDES Surface Water Discharge Permits, August 1993

(Standard Provisions, Attachment G). Where provisions or reporting requirements specified in this Order and Attachment G are different from equivalent or related provisions or reporting requirements given in the Standard Provisions in Attachment D, the specifications of this Order and Attachment G shall apply in areas where those provisions are more stringent. Duplicative requirements in the federal Standard Provisions in VI.A.1 (Attachment D) and the regional Standard Provisions (Attachment G) are not separate requirements. A violation of a duplicative requirement does not constitute two separate violations.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the MRP (Attachment E) and future revisions thereto. The Discharger shall also comply with the requirements contained in *Self Monitoring Programs, Part A*, August 1993 (Attachment G).

C. Special Provisions

1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:

a. If present or future investigations demonstrate that the discharges governed by this Order will have, or will cease to have, a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of the receiving waters.

b. If new or revised WQOs or Total Maximum Daily Loads (TMDLs) come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs and wasteload allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs or TMDLs, or as otherwise permitted under federal regulations governing NPDES permit modifications.

c. If translator or other water quality studies provide a basis for determining that a permit condition should be modified.

d. If an administrative or judicial decision on a separate NPDES permit or WDR addresses requirements similar to this discharge.

e. Or as otherwise authorized by law.

The Discharger may request permit modification based on the above. The Discharger shall include in any such request an antidegradation and antibacksliding analysis.